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Richard C. Reba, M.D. is Professor of Radiology and Chief, Nuclear Medicine Section, University of Chicago and the Chair of the Nuclear Energy Research Advisory Committee (NERAC). Dr. Reba has been on the faculty of the Johns Hopkins University and George Washington University. Research interests have been in the area of the drug development, specifically the research and use of radiopharmaceuticals for diagnosis (using single photon and positron emission tomography, SPECT & PET) and treatment of human disease. Specifically, Dr. Reba is now working on neuropsychiatric diseases and the treatment of ovarian cancer. Dr. Reba has worked in patient care, research, education, administration and been a consultant for several federal government departments and agencies, including the National Institutes of Health, Department of Energy, Veterans' Administration, Federal Aviation Agency and international agencies, such as the International Atomic Energy Agency. Dr. Reba has been elected President of both the American College of Nuclear Physicians and The Society of Nuclear Medicine. Dr. Reba has over 300 publications and is an Editor of 4 books. Dr. Reba's professional affiliations include the Society of Nuclear Medicine, American College of Nuclear Physicians, American College of Physicians, Johns Hopkins Medical and Surgical Society, American Association for the Advancement of Science, American Medical Association, Chicago City and Illinois State Medical Societies, National Coalition of Physicians Against Family Violence.

Forecast of the Future Demand for Medical Isotopes: The Affect of an Increased Demand for Radioisotopes on Research, Diagnostic Imaging and Therapy.

Predictions of the growth of radioisotope demand are available from several formal studies performed during the past five years. For example, from the Frost and Sullivan FFTF Medical Isotopes Market Study, Nov. 97 report, from the Evaluation of Medical Radionuclide Production with the Accelerator Production of Tritium (APT) Facility report published by the Medical University of South Carolina and Westinghouse Savannah River Co. published in July 97 and the November, 1994, Worldwide Isotope Market Update Report by Arthur Andersen and Co.

The trends are similar from each, indicating a substantial increase in demand and they only differ in the magnitude of the rate of increase. E.g., diagnostics are predicted to increase in a range of 7% - 16% and therapeutics, from 7% - 14% from now thru 2020. We also have some historical Mo-99 data that indicate a 4% growth (in Mo-99 C/yr.) from 1978 thru 1994, data from '94-'98 are lacking. There are further data to indicate that, after the FDA approves a new radiopharmaceutical, for example, Tl-201, I-123 and Co-60, the annual growth for using these isotopes was 5% - 10%. Other notable reports that include surveys of isotope demands and predictions of what affects that failure to meet these demands would have on research, industry and the clinical care of patients have also been published.

A perspective of what others believe what the increase in radioisotope demand for research and clinical care will be presented from several sources at this meeting and it will be interesting too compare them and useful to homogenize any disparate opinions. Given the anticipated increasing requirements for radioisotopes by biomedical researchers, the proprietary drug industry, the radiopharmaceutical suppliers and the clinical demand for a broader use of cost-effective and cost-beneficial patient care diagnostic and therapeutic techniques, the DOE is attempting to define what its responsibilities and specific role should be in providing stable and radioactive isotopes to these communities.

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